

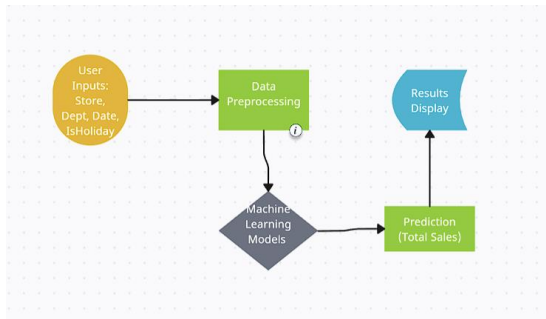
## Project Design Phase-II

### Data Flow Diagram & User Stories

Date	4-November 2023
Team ID	592358
Project Name	Walmart Store Sales Forecasting
Maximum Marks	4 Marks

#### Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



1. User Inputs: The user provides Store, Dept, Date, and IsHoliday information.
2. Data Preprocessing: User inputs are processed and formatted for model input.
3. Machine Learning Models: Models like ARIMA, Random Forest, or XGBoost are used for predictions.
4. Model Training and Testing: Models are trained and tested on historical sales data.
5. Prediction (Total Sales): Models predict total sales based on user inputs.
6. Results Display: Predicted total sales are displayed to the user, providing insights.

Dataflow diagram-



## User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Data Analyst	Data Collection and Preprocessing	WSF-1	As a data analyst, I can access and retrieve historical sales data from 45 Walmart stores.	I can retrieve data for all 45 stores, including store information, monthly sales, and information on promotional markdown events.	High	Sprint-1
Data Analyst	Data Preprocessing	WSF-2	As a data analyst, I can preprocess the sales data to clean, format, and prepare it for analysis.	The data is cleaned of any missing or erroneous entries, formatted for machine learning models, and stored in a usable format.	High	Sprint-1
Data Analyst	Model Training	WSF-3	As a data analyst, I can select and train machine learning models to predict sales based on historical data.	The models are trained using the preprocessed data and tested for accuracy.	High	Sprint-2
Data Analyst	Model Testing	WSF-4	As a data analyst, I can assess the performance of the trained models by testing them against historical data.	As a data analyst, I can assess the performance of the trained models by testing them against historical data.	High	Sprint-2
Data Analyst	Results Presentation	WSF-5	As a data analyst, I can visualize and present the sales forecasting results.	The forecasting results are displayed through data visualization tools and presented in a clear and understandable manner.	High	Sprint-3
Administrator	Security and Access Control	WSF-6	As an administrator, I can ensure the security of the sales forecasting system and manage access control.	The system is protected from unauthorized access, and access control mechanisms are in place for data protection.	High	Sprint-4
Customer Care Executive	Notifications	WSF-7	As a customer care executive, I can receive notifications regarding sales forecasts.	Notifications are sent to customer care executives for informed decision-making.	Medium	Sprint 3